



Mediterranean diet and patient with heart failure
Dieta mediterranea e paziente con scompenso cardiaco

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WORLDWIDE CLINICAL TRIALS
SCIENTIFICALLY MINDED • MEDICALLY DRIVEN



Alberto Sordi in "Un Americano a Roma"



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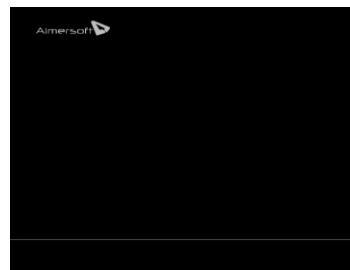


WORLDWIDE CLINICAL TRIALS
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La Dieta Mediterranea è patrimonio culturale immateriale dell'Umanità

- La Dieta Mediterranea rappresenta un insieme di **competenze, conoscenze, pratiche e tradizioni che vanno dal paesaggio alla tavola, includendo le colture, la raccolta, la pesca, la conservazione, la trasformazione, la preparazione e, in particolare, il consumo di cibo.**
- La Dieta Mediterranea è caratterizzata da un modello nutrizionale rimasto costante nel tempo e nello spazio, costituito principalmente da **olio di oliva, cereali, frutta fresca o secca, e verdure, pesce, una moderata quantità di latticini e carne, e molti condimenti e spezie, il tutto accompagnato da vino o infusi, sempre in rispetto delle tradizioni di ogni comunità.**
- Tuttavia, la Dieta Mediterranea (dal greco diaita, o stile di vita) è molto più che un semplice alimento. Essa promuove **l'interazione sociale**, poiché il pasto in comune è alla base dei costumi sociali e delle festività condivise da una data comunità, e ha dato luogo a un notevole corpus di conoscenze, canzoni, massime, racconti e leggende.



Dalla letteratura scientifica.....



Food consumption patterns in the 1960s in seven countries¹⁻³

Daan Kromhout, Ancel Keys, Christ Aravanis, Ratko Buzina, Flaminio Fidanza, Simona Giac Annemarie Jansen, Alessandro Menotti, Srecko Nedeljkovic, Maija Pekkarinen, Bozidar S Simic, and Hironori Toshima

Mediterranean Diet, Lifestyle Factors, and 10-Year Mortality in Elderly European Men and Women The HALE Project

Kim T. B. Kooops, MSc

Context: Dietary patterns and lifestyle factors are associated with mortality from all causes.

Tra individui di eta' tra i 70 e i 90 anni, l'aderenza alla **dieta mediterranea** e ad uno stile di vita sano e' associata con una **riduzione del tasso di mortalita' superiore al 50%**

- per tutte le cause
- per malattie cardiovascolari
- per cancro

minimize their risk of death from morbidity and maximize their prospects for healthful aging.²

Dietary patterns and other modifiable lifestyle factors are associated with mortality from all causes, coronary

See also pp 1440 and 1490.

heart disease (CHD), cardiovascular diseases (CVD), and cancer.^{3,4} As yet, few studies have investigated the combined effect of diet and other lifestyle factors.^{5,6}

In the current study, we investigated the association of individual and combined dietary patterns and lifestyle factors (alcohol use, smoking sta-

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Dalla letteratura scientifica.....



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ORIGINAL COMMUNICATION

Mediterranean diet and all-causes mortality after myocardial infarction: results from the GISSI-Prevenzione trial

Questo studio su 11323 pazienti sopravvissuti ad infarto del miocardio mostra come la raccomandazione dietetica, basata sui vantaggi della Dieta Mediterranea, sia stata facilmente seguita dai pazienti.

Subjects: A total of 11 323 men and women with myocardial infarction. All subjects received advice to increase their consumption of fish, fruit, raw and cooked vegetables and olive oil.
Measurements: The intakes of the five foods were assessed at baseline, 6, 18 and 42 months. Associations of food intakes, a combined dietary score, and the risk of death over 6.5y were estimated adjusting for several non-dietary variables, using pooled logistic regression.
Results: Subjects generally improved their diet according to the advice given. All foods were associated with a significant reduction in risk of death. Compared with people in the worst dietary score quarter, the odds ratio for those in the best score

Lo studio conferma come tali pazienti cardiopatici che seguono una Dieta Mediterranea abbiano probabilità più basse di morte prematura. Dei 5 alimenti consigliati, **pesce, frutta, verdura cotta, verdura cruda e olio di oliva**, nessuno ha mostrato un effetto dominante sugli altri, ma **ciascuno ha avuto un importante effetto protettivo indipendentemente dagli altri 4 alimenti.**



BMJ

RESEARCH

Adherence to Mediterranean diet and health status: meta-analysis

Francesco Sofi, researcher in clinical nutrition,^{1,2,3} Francesca Cesari, researcher,^{2,3} Rosanna Abbate, full professor of internal medicine,^{1,3} Gian Franco Gensini, full professor of internal medicine,³ Alessandro Casini, associate professor of clinical nutrition^{2,4,5}

Department of Medical and

ABSTRACT

contribution to a favourable health status and a better

Analisi di 12 studi su piu' di un milione e mezzo di pazienti seguiti per un periodo da 3 a 18 anni:

Una dieta ricca di **frutta, vegetali, legumi , cereali** in aggiunta ad **olio di oliva** come **unica fonte di grassi**, insieme ad un **moderato consumo di vino rosso** durante i **pasti** ha mostrato **benefici sulla mortalita'** per tutte le cause e **cardiovascolare** , sul metabolismo lipidico , sulla pressione arteriosa, e su altre patologie croniche

... on cardiovascular mortality, stroke, relative risk 0.94, 0.87 to 0.95), incidence of or mortality from cancer (0.94, 0.92 to 0.96), and incidence of Parkinson's disease and Alzheimer's disease (0.87, 0.80 to 0.96).

Conclusions Greater adherence to a Mediterranean diet is associated with a significant improvement in health status, as seen by a significant reduction in overall mortality (9%), mortality from cardiovascular diseases (9%), incidence of or mortality from cancer (6%), and incidence of Parkinson's disease and Alzheimer's disease (13%). These results seem to be clinically relevant for public health, in particular for encouraging a Mediterranean-like dietary pattern for primary prevention of major chronic diseases.

INTRODUCTION

The Mediterranean diet, representing the dietary pattern usually consumed among the populations bordering the Mediterranean sea, has been widely reported to be a model of healthy eating for its

... to establish the role of adherence to a Mediterranean diet in primary prevention.

METHODS

Data sources

We focused on prospective studies investigating the association between adherence to a Mediterranean diet and health outcomes. We searched PubMed, Embase, Web of Science, and the Cochrane Central Register of Controlled Trials databases up to 30 June 2008, using a search strategy that included both truncated free text and exploded MeSH terms. MeSH headings included "Mediterranean", "diet", "dietary pattern", "disease", "health", "cardiovascular disease", "cardiovascular disease", "coronary heart disease", "degenerative disease", "cancer", "neoplasm", "prospective", "follow-up", or "cohort", and their variants. The search strategy had no language restrictions. We also consulted references from the extracted articles and



Dalla letteratura scientifica.....



Effectiveness of the Mediterranean diet in the elderly

Blanca Roman¹
Laura Carta²

Abstract: The Mediterranean diet is known to be one of the healthiest dietary patterns in the world due to its relation with a low morbidity and mortality for some chronic diseases. The

L'analisi di 39 selezionate pubblicazioni sull'argomento conferma il benefico effetto della **Dieta Mediterranea sull'invecchiamento**, o meglio, su un **buon invecchiamento**

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insulin resistance, the prevalence of the metabolic syndrome, antioxidant capacity, the incidence of acute myocardial infarction, and cardiovascular mortality. Some positive associations with quality of life and inverse associations with the risk of certain cancers and with overall mortality were also reported.

Keywords: Mediterranean diet, elderly, health, review

Introduction

According to the 2002 World Health Organization (WHO) health report, a diet poor in fruits and vegetable is the third preventable risk factor for chronic diseases (specific types of cancers, cerebrovascular diseases and ischemia) which have replaced infectious disease as the leading cause of morbidity and mortality in the world. The same report showed that among the twenty countries with the highest life expectancy in the world, four of them are Mediterranean countries (France, Italy, Spain, and Greece) (WHO 2001).

Mediterranean countries share a common dietary pattern first defined by Ancel Keys (Keys et al 1986) when he observed important geographical differences in the incidence rates of cardiovascular disease, certain cancers and other nutrition-related diseases that were mostly attributable to supposedly unhealthy food patterns whereas the Mediterranean dietary pattern was considered as the responsible factor for health advantages. Such pattern was the main focus of study in 1993 at the International Conference on the Diets of the Mediterranean, although the Mediterranean dietary pattern had been previously defined in other meetings (Helsing et al 1989; Serra Majem et al 1993; Nestle et al 1995; Willett et al 1995). Mediterranean dietary patterns are comprised of: abundant plant foods (fruits, vegetables, breads, other forms of cereals, pulses, nuts and seeds); minimally processed, seasonally fresh and locally grown foods; fresh fruits as the typical daily dessert with sweets elaborated from nuts, olive oil and concentrated sugars or honey that are consumed during feast days; olive oil as the principal source of dietary lipids; dairy products (mainly cheese and yoghurt) consumed in low to moderate amounts; fewer than four eggs consumed per week;

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Dalla letteratura scientifica.....



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ORIGINAL ARTICLE

Cross-sectional relationship of a Mediterranean type diet to diastolic heart function in chronic heart failure patients

Christina Chrysoskou · Christos Pitsavos · George Metallinos · Christos Antoniou · Emmanouil Oikonomou · Ioann Katsouris · Anastolis Tsoulfas · George Tzitzikalakis

Questo studio ha dimostrato come una stretta aderenza alla **Dieta Mediterranea** sia associata ad un **miglioramento dello scompenso cardiaco**, con specifici effetti benefici di **verdure, pesce e olio di oliva** sul cuore scompensato

function and dietary habits in patients with CHF. During 2007, 372 consecutive CHF patients were enrolled. Biventricular systolic and diastolic function was evaluated through echocardiography. Dietary habits were recorded using a food frequency questionnaire, and adherence to a Mediterranean diet was evaluated using the MedDietScore. The MedDietScore was positively correlated with log S_{mV} , left atrial EF and V_p , and inversely correlated with log EA and log Emv/Amv levels ($p < 0.05$). After adjusting for potential confounders, only log EA levels were inversely associated with the MedDietScore ($p < 0.05$). Following analysis per specific ailments, the log EA ratio was inversely associated with fish intake and olive oil use; the log Emv/Amv ratio was inversely associated with fish intake; log S_{mV} was positively associated with fish, olive oil and pasta intake; log LAKE was positively associated with olive oil use and alcohol drinking (all $p < 0.05$). This study demonstrated, in a cross-sectional design, a potential beneficial effect of a Mediterranean diet on biventricular systolic and diastolic function.

Despite therapeutic advances made over the past 15 years, heart failure remains one of the main components of the overall burden of cardiovascular morbidity and mortality [1]. Finding innovative ways to prevent cardiovascular death is a major challenge. Among other approaches, the role of lifestyle modification has attracted the interest of clinicians in the field of chronic heart failure (CHF).

During the past 20 years, several observational studies and clinical trials have provided scientific evidence that the Mediterranean diet, rich in fruits, vegetables, legumes, whole grains, fish and low-fat dairy products, with olive oil as the principal source of fat, is associated with a lower incidence of cardiovascular disease (CVD) and some cancer types [2–7]. In 1990, the Lyon Heart Study, a randomised secondary prevention clinical trial of coronary heart disease (CHD) patients, revealed the protective effect of this dietary pattern on cardiac complications of patients within the first 27 months of follow-up [3]. More recently, the GRECS study investigators, studying 2,172 acute coronary syndrome patients, observed that long-term adherence to a Mediterranean diet had a beneficial effect both on the severity of the event and on short- and long-term prognosis [4]. Several pathophysiological mechanisms have been proposed to explain the beneficial effects of a Mediterranean diet on the cardiovascular system, including the diet's antithrombotic, anti-inflammatory and antioxidant effects [5–7]. Recently, adherence to a Mediterranean diet was shown to favorably affect heart rate

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Dalla letteratura scientifica.....



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Fish Intake and Risk of Incident Heart Failure

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OBJECTIVES Our aim was to investigate the relation between fish consumption and incidence of congestive heart failure (CHF).
BACKGROUND The incidence and health burden of CHF are rising, particularly in older persons. Although $n-3$ fatty acids have effects that could favorably influence risk of CHF, the relation between fish intake and CHF incidence is unknown.
METHODS Among 4,738 adults age ≥ 65 years and free of CHF at baseline in 1989–90, usual dietary intake was assessed using a food frequency questionnaire. In a participant subsample, consumption of tuna or other broiled or baked fish, but not fried fish, correlated with plasma phospholipid $n-3$ fatty acids. Incidence of CHF was prospectively adjudicated.

Questo studio ha mostrato come il consumo di tonno o altro pesce cucinato al forno o alla griglia (non fritto) sia associato ad una piu' bassa incidenza di scompenso di cuore

In partnership with American College of Cardiology Foundation

Congestive heart failure (CHF) is a growing clinical and public health problem. In the U.S., nearly 5 million individuals have CHF, more than 500,000 new cases are diagnosed yearly, and CHF health care costs exceed \$28 billion annually (1). Congestive heart failure is particularly common with advancing age (2) and is the leading cause of hospitalization among adults age ≥ 65 years (3). Among older adults, CHF incidence is $\sim 2\%$ per year (4) and predicts three to six times higher mortality (5). Identification of measures for preventing CHF, particularly among older individuals, is therefore of considerable clinical and public health importance.

In experimental studies, fish oil favorably affects hemodynamics (6), inflammation (7), vascular responses (8–10), and left ventricular (LV) indices (11–17), each of which could reduce risk of CHF. In cross-sectional analyses (18),

intake of tuna or other broiled or baked fish is inversely associated with systolic blood pressure, C-reactive protein levels, and carotid intimal medial thickness, whereas fried fish intake is positively associated with systolic blood pressure and carotid intimal medial thickness, all independent risk factors for CHF (4). However, although the relation between fish intake and coronary heart disease risk has been investigated (19), little is known regarding relation of fish intake, or indeed, any dietary factor, with incidence of CHF in humans.

We investigated associations between fish consumption and incidence of CHF in the Cardiovascular Health Study, a population-based cohort study of determinants of cardiovascular disease among adults age ≥ 65 years. Our hypothesis was that consumption of tuna and other broiled or baked fish, but not fried fish, would be associated with a lower incidence of CHF.

METHODS

Design and population. In 1989 to 1990 and 1992, 5,888 men and women age ≥ 65 years were randomly selected and enrolled from Medicare eligibility lists in four U.S. communities (20,21). Baseline evaluation included health status, medical history, physical examination, electrocardiography, echocardiography, carotid ultrasonography, pulmonary function testing, and laboratory testing (2,4,5,20–22). We excluded 687 participants enrolled in 1992 (a food frequency questionnaire [FFQ] was not administered in 1992), 105

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Primary Prevention of Cardiovascular Disease with a Mediterranean Diet

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María-Isabel Covas, D.Pharm., Ph.D., Dolores Corella, D.Pharm., Ph.D., Fernando Arós, M.D., Ph.D.,
Enrique Gómez-Gracia, M.D., Ph.D., Valentina Ruiz-Gutiérrez, Ph.D., Miquel Fiol, M.D., Ph.D.,
José Lapetra, M.D., Ph.D., Rosa María Lamuela-Raventós, D.Pharm., Ph.D., Lluís Serra-Majem, M.D., Ph.D.,
Xavier Pintó, M.D., Ph.D., Josep Basora, M.D., Ph.D., Miguel Ángel Muñoz, M.D., Ph.D., José V. Sorlí, M.D., Ph.D.,

Questo studio controllato e randomizzato su 7500 pazienti ad alto rischio cardiovascolare pubblicato sulla piu' autorevole rivista delle scienze mediche (*New England Journal of Medicine*) ha dimostrato come la **Dieta Mediterranea** riduca in maniera sostanziale il rischio cardiovascolare rispetto ad una dieta non mediterranea ma semplicemente povera di grassi

Mediterranean diet supplemented with mixed nuts, or a control diet (advice to reduce dietary fat). Participants received quarterly individual and group educational sessions and, depending on group assignment, free provision of extra-virgin olive oil, mixed nuts, or small nonfood gifts. The primary end point was the rate of major cardiovascular events (myocardial infarction, stroke, or death from cardiovascular causes). On the basis of the results of an interim analysis, the trial was stopped after a median follow-up of 4.8 years.

RESULTS

A total of 7447 persons were enrolled (age range, 55 to 80 years); 57% were women. The two Mediterranean-diet groups had good adherence to the intervention, according to self-reported intake and biomarker analyses. A primary end-point event occurred in 288 participants. The multivariable-adjusted hazard ratios were 0.70 (95% confidence interval [CI], 0.54 to 0.92) and 0.72 (95% CI, 0.54 to 0.96) for the group assigned to a Mediterranean diet with extra-virgin olive oil (96 events) and the group assigned to a Mediterranean diet with nuts (83 events), respectively, versus the control group (109 events). No diet-related adverse effects were reported.

CONCLUSIONS

Among persons at high cardiovascular risk, a Mediterranean diet supplemented with extra-virgin olive oil or nuts reduced the incidence of major cardiovascular events. (Funded by the Spanish government's Instituto de Salud Carlos III and others; Controlled-Trials.com number, ISRCTN35739639.)

*The PREDIMED (Prevención con Dieta Mediterránea) study investigators are listed in the Supplementary Appendix, available at NEJM.org.

Drs. Estruch and Martínez-González contributed equally to this article.

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Grassi animali

Carne rossa



Derivati del latte



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Grazie

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Спаси

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Salamat